

CLAIMS

Please enter the following claims (claims 1-27)

1. (original) A micro-electromechanical system (MEMS) switch comprising:

a movable beam within a cavity, said movable beam being anchored to a wall of said cavity;

a first electrode embedded in said movable beam; and

a second electrode embedded in an wall of said cavity, facing said first electrode, wherein said first and second electrodes are respectively capped by a metallic contact.

2. (original) The MEMS switch as recited in claim 1, wherein said metallic contact of said first and second electrodes respectively protrude above said first electrode and below said second electrode.

3 (original) The MEMS switch as recited in claim 1, wherein said first electrode is a signal electrode and said second electrode is an actuation electrode.

4. (original) The MEMS switch as recited in claim 3, wherein said actuation and signal electrodes are made of copper.

5. (original) The MEMS switch as recited in claim 1, wherein said movable beam is anchored to the wall of said cavity at at least one end thereof.

6. (original) The MEMS switch as recited in claim 1 where said metallic contact is selected from the group consisting of Au, AuNi, AuCo, Pt, PtNi, Ru, Ru, Rh, Os, Ir, Pd, PdNi, and PdCo.

7. (original) The MEMS switch as recited in claim 1, wherein said cavity is filled with gas, said gas being selected from the group consisting of nitrogen, helium, neon, krypton and argon.

8. (original) The MEMS switch as recited in claim 1, wherein the metallic contact of said second electrode has a flat surface that is smaller than the surface of the metallic contact of said first electrode.

9. (currently amended) The MEMS switch as recited in claim 4 10, wherein said dielectric is made of SiN, SiO₂, SiON, SiCH, SiCOH, SiCHN, TiO₂, ZrO₂, HfO₂, Al₂O₃, Ta₂O₃ and combinations thereof.

10. (currently amended) A micro-electromechanical system (MEMS) switch comprising:

a movable beam within a cavity anchored to a wall of the cavity;

at least one conductive actuation electrode embedded in a dielectric;

a conductive signal electrode embedded in dielectric integral to said movable beam; and

a raised metallic contact capping said conductive signal electrode and a recessed metallic contact capping said actuation electrode.

11. (original) The MEMS switch as recited in claim 1, wherein said caps of conductive signal electrodes are made of noble material, and said actuation and signal electrodes are made of copper.

12. (original) The MEMS switch as recited in claim 1 wherein said recessed metallic contact is made of a material selected from the group consisting of Au, AuNi, AuCo, Pt, PtNi, Ru, Rh, Os, Ir, Pd, PdNi, and PdCo.

13. (original) The MEMS switch as recited in claim 1, wherein the exposed surface of said second electrode is recessed below the exposed surface of said dielectric, and said cap superimposed on top of said second electrode matches the exposed surface of said dielectric.

Please cancel claims 14-27 without prejudice